



Grantees interested in participating in training workshops and follow-up onsite help may contact Audrey Smolkin (asmolkin@hrsa.gov) for referrals and further information.

February 13, 2001

MIS 101

On February 13, 2001, Kevin Kearns, Chief Information Officer for the Health Choice Network of Miami FI, addressed CAP grantees in a conference call on the subject of Management Information Systems.

The Bureau of Primary Health Care (BPHC) recognizes the value of shared information systems among health care providers and has been instrumental and supportive in the evaluation of systems projects, providing information on all levels of development and operation. During this call, Mr. Kearns discussed the need to become conversant with the details of these systems in order to optimize successful implementation from the start. Hardware, software and communication infrastructure comprise the bones of the information system. Users' needs and requirements must be considered carefully in the building of a system because integrated systems must meet the needs of multiple users and require careful development and investigation of function as well as level of use and degree of security.

Staffing and Vendor Selection

Mr. Kearns explained that competent staffing is paramount to the success of any system development project. As is true for any project, good leadership is an important key for setting standards and maintaining proper systems function. Most successful projects have featured a ratio of one help-desk person to each 100 system-users in the process of making the system fully operational. This seems to be the optimal ratio for meeting the MIS needs of health care providers who share a system designed to improve public health, generate required revenue, and improve cost-effectiveness. Although the value of a knowledgeable and capable staff is immeasurable, a mix of staff and vendor consultants is typically required to meet both the routine and unique needs of system users.

During the vendor selection process, forming a project team that represents each key functional area of the organization is critical. Team members should be in clear agreement on the decision-making and progress reporting processes used throughout the procurement period. The team should also determine goals and objectives, set realistic expectations and create procedures for handling any conflicts that may arise.

As with any other contract, it is important to review all contractual language thoroughly. Legal counsel is necessary to review every aspect of the contractual agreement and be sure the contract is clearly tied to the RFP.

Custom or COTS Systems?

Mr. Kearns noted that there are two options in the development of an information system – purchasing a commercial off the shelf (COTS) system or developing a custom system. Each option has clear advantages and disadvantages. Developing a custom system or extensively customizing an existing system requires additional IS staff and resources and takes longer to complete. Some level of modification can generally be made to a COTS system, but, depending on how extensive the changes, this process can also be very costly and can sometimes be traumatic to the system. Furthermore, any modifications made to a COTS system may not remain compatible with subsequent system upgrades.

Centralized or Decentralized Systems?

Another decision to be made upfront involves whether to take a centralized or decentralized approach to system development. This involves a number of considerations, including security, maintenance, backups, upgrades to both hardware and software, help desk components, economy of scale, initial and ongoing maintenance, etc. The technology is currently available to take a centralized approach, if the project team finds this approach will meet organizational needs.

The system that is installed at each center or data warehouse is considered the common system. Data warehouses can be internal, but larger organizations generally direct their data into a separate system that can be maintained and used for initiating reports. It is critical to determine upfront the nature of the data that are being input and the optimal reporting procedures for data utilization to get the most effective use of the data.

Other Options

Application service providers have the ability to manage system hardware and software at their own site. Clients who use them can access their information without bearing the initial buyer costs of the equipment and software. The vendor becomes responsible for 24-hour maintenance, which can reduce health care providers' exposure as technology evolves. The downside of this arrangement is that it can be more difficult to customize the system. While support may be available 24 hours a day, helpdesk personnel may not be as familiar with the software as onsite staff would be, and the provider/client may not be ready for upgrades when the service provider is ready to initiate them. In spite of these issues, many experts believe that using application service providers will optimize the transition to standardizing healthcare record and management systems.

Web-based solutions exist that use the Internet to link providers to common data and applications and the use of provider home pages to connect with other providers has been found helpful in some cases. Web-based solutions are clearly evolving as a viable option, as demonstrated by the web-based look that characterizes many systems in advance of full implementation. However, security issues and delayed operations for certain functions can still be problematic when using web-based options. Information on related ANSI standards is available at <http://www.hl7.org>.

The issues discussed by Mr. Kearns include some of the more basic considerations that need to be addressed by the project team early in the systems development process. Carefully considering these options and others that flow from this decision-making process is critical for establishing an information system that will work seamlessly among multiple providers. Careful attention to details upfront is the best approach to developing systems that can align the clinical, financial, and entitlement information and

support the cost effectiveness and increased efficiency necessary for effective health care service delivery.

HRSA's BPHC website contains much helpful information on MIS and working with MIS vendors. For more information, visit www.bphc.hrsa.dhhs.gov/CHC and click on "initiatives" to review information on shared integrated management information systems (SIMIS), including vendor, RFP process, and integration issues, as well as the Integrated Services Development Initiative.

Please Note:

If you have follow-up questions or concerns, please contact Audrey Smolkin (asmolkin@hrsa.gov) and she will work with the consultant to provide the information you need.

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